REMARKS

Claim Rejections – 35 U.S.C. 102(e)

Claims 1, 2 and 6 were rejected under 35 U.S.C. 102(e) as being anticipated by Lau et al.

Response

Claim 1

Claim 1 has been amended to state that a size of the volume level increment is determined as destination volume minus the volume level of the digital signal divided by the predetermined time period. As Lau does not teach this specific equation for determining a size of a volume level increment, and teaches user selectable parameter values that do not have this specific relationship between them, the applicant asserts that this added limitation should distinguish Claim 1 from Lau. In order for Lau to always achieve a volume increase in a same time period, a user must adopt a method of trial and error (please see Office Action, page 3: "The system is capable of arriving at the destination volume in the same period depending on the adjustments made to the system…These functions may be achieved through trial and error or just by using user feedback"). The added limitation of Claim 1, which is supported by FIG.2, step 180, clearly uses a mathematical relation to determine a size of the volume level increment, which is not taught by Lau.

In particular, the applicant wishes to refer the Examiner to Lau, FIG.5, which teaches the steps of comparing the volume difference to the parameter max_step (step 44), for determining whether to increase the volume by increments (step 45) or whether to increase the volume instantaneously (step 48). As there is no step taken by Lau of dividing the parameter VOLdiff by a desired time period, the applicant asserts that Lau does not teach that "a size of the volume level increment is determined as the destination volume minus the volume level of the digital signal divided by the predetermined time period".

Furthermore, the applicant believes that the Examiner mistakenly equates the parameter vol_step of Lau with the size of the volume level increment taught in

Claim 1. In the previous Office Action, the Examiner states that "the size of the vol_step per sample is determined based on the Voldiff which takes into account Volf and Voli as well as the volume increments per cycle" [Page 5]. The applicant notes that this parameter (vol_step) is not a size of an increment but is merely **a number of times** a volume will be incremented in a clock cycle. "The specific response of the multiplier 33 to signal volume changes indicated by transitions in the input volume signal VOL_IN is dynamically controlled using 2-bit parameter values vol_step, max_step, and sample_size, where vol_step indicates the **number** of incremental volume steps per clock cycle" *(emphasis added)* [Col.6, lines 12 – 17].

Moreover, Lau teaches: "If it is desirable to effect an instantaneous volume change, the parameter value vol_step is set equal to zero such that in response to the comparison step 43, the output volume signal VOL_OUT is set to equal to the desired final volume level VOL_f...Typically, vol_step is set to either 2 or 4 which, in turn, call for 2 and 4 volume increment changes per clock cycle" [Col.7, lines 5 – 12]. Clearly, from the above-quoted passage, the parameter value vol_step is not a **size** of a volume level increment. Lau teaches that the size of volume level increments is user-selectable (Claim 9, Lau) but is silent on determining the size of these increments according to a volume difference divided by a predetermined time period.

For the above reasons, the applicant believes that Claim 1 should overcome the 102 rejections. Reconsideration of Claim 1 is respectfully requested.

Claims 2 and 6

Claims 2 and 6 are dependent on Claim 1. As the applicant believes Claim 1 has been placed in a position for allowance, claims 2 and 6 should also be found allowable.

Claim Objections – 35 U.S.C. 103(a)

Claims 3 and 4 were rejected under 35 U.S.C. 103(a) as being unpatentable over Lau in view of Andersen et al.

Response

Claim 3

Lau teaches that the parameter vol_step is user-selectable in some embodiments. If Lau specifically teaches that this value should have a user-selectable option, it is illogical to a skilled person to combine the teachings of Lau with another prior art where the parameter value is always determined according to a non-user-selectable formula. Furthermore, Claim 3 is dependent on Claim 1, which the applicant believes has been placed in a position for allowance. For these reasons, the applicant asserts that Claim 3 should be found allowable.

Claim 4

Claim 4 is dependent on Claim 1. As the applicant believes Claim 1 has been placed in a position for allowance, Claim 4 should also be found allowable.

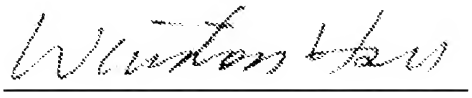
Claim 5 was rejected under 35 U.S.C. 103(a) as being unpatentable over Lau in view of Andersen et al. and further in view of Jubien et al.

Response

Claim 5 is dependent on Claim 1. As the applicant believes Claim 1 has been placed in a position for allowance, Claim 5 should also be found allowable.

Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Sincerely yours,



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